



AAR-100

Human Factors Newsletter # 04-14

July 10, 2004 – July 23, 2004

Technical Information: Web Based Portal Computer Human Interface Guidelines, Vicki Ahlstrom, Kenneth Allendoerfer, William J. Hughes Technical Center.

Executive Summary. This document provides computer-human interface (CHI) guidelines for web-based portals. These guidelines can also be applied to public websites, company intranets, and other similar web-based applications. This document complements the existing Human Factors Design Standard (HFDS) (Ahlstrom & Longo, 2003). This document provides definitions and conventions specific to portal systems. Major topic areas contained in this document include general guidelines, page layout, text design, graphic design, and accessibility standards. The guidelines are in the form of *should* and *shall* statements, and are appropriate for insertion into requirements documents. Additionally, the document provides examples and explanations for how and why guidelines should be used. As with any set of CHI guidelines, these guidelines are meant to be applied with the help of a human factors professional and adapted to the system being designed. The guidelines contained here are not intended to stand alone, but rather should be a part of a human factors program.

Point of Contact: E. Stein, WJHTC

Technical Interchange Meeting: The Human Factors working group of the Inter-Agency Integrated Product Team held a technical interchange meeting at the William J. Hughes Technical Center. The meeting was sponsored by Dino Piccione (FAA), Richard Mogford (NASA-Ames), and Jacqueline Rehmann (FAA). The theme of the meeting was "Building an Interlocking Human Factors Air Traffic Management Research Program." There were over 40 human factors researchers, practitioners and managers in attendance. Speakers covered a variety of topics including the future of the National Airspace System as described by Target System Description, User Request Evaluation Tool (URET) Lessons Learned, Distributed Air Ground Research, Collocation of Traffic Management Advisor, URET, Controller-Pilot Data Link Communications at the En Route workstation, and ATO-Terminal Human Factors Issues and Concerns. The second day of the meeting was highlighted by a panel discussion centered on the meeting theme, with Jacqueline Rehmann as the moderator. The meeting concluded with a short session to map out the next steps that will lead to inter-agency collaboration within the human

factors community. The meeting agenda and presentations can be accessed by pointing to:
<http://ksn-team.faa.gov/aar-100/iaipt-hf/>

Point of contact: D. Piccione, ATOP-R&D

JANUS: In concert with ATO-S, a candidate set of Air Traffic Control Towers (ATCTs) has been identified for inclusion in the JANUS “go-to” program (CAMI researcher visits the facility and facilitates the JANUS operational error analysis). The in-briefs for these ATCTS are planned to start in July. A team representing FAA management, NATCA, and CAMI will visit the facilities to provide information and answer questions about the program. Candidate facilities will then determine whether they will volunteer to participate in this effort. (J. Pounds, CAMI)

Acronyms: We've recently added a [list of acronyms](#) to our Web site that will be helpful as you navigate through documents. We'll update this list from time-to-time. If you see that we overlooked something, please let us know and we'll include it in the next iteration. Send your e-mail to bill.ctr.berger@faa.gov.

R&D Annual Review: The FAA R&D Annual Review available on the web site shown below:
<http://research.faa.gov/docs/annualreport2003.pdf>

UAV: Kevin Williams is participating in an operational test of an unmanned aerial vehicle (UAV) system called the Altair, built by General Atomics, Inc. The Altair is a modification of the Predator B UAV currently used by the Air Force. The operational test is being conducted by the Coast Guard and is being monitored by the NASA Access 5 group. Flights take off from King Salmon, AK and are being controlled from both King Salmon and a ground control station located in Juneau. The Access 5 group is interested in the use of UAVs within the National Airspace System, and this operational test is an important first step along that path. (K. Williams, CAMI)

Program Review: The FY04 General Aviation, Vertical Flight, and Aviation Maintenance Human Factors Program Review will be held November 16, 2004 at the Federal Aviation Administration Headquarters Bessie Coleman Training Center from 9:00 AM to 3:00 PM.. The program review format will be a poster session. This flexible format will allow informal discussions between researchers and sponsors. The researcher will stand by his/her poster most of the day, thereby allowing sponsors an opportunity to visit. (W. Krebs, ATOP-R&D)

US Navy Tour: The William J. Hughes Technical Center's Human Factors Group hosted a tour for representatives from the US Navy's Surface Warfare Organization, Panama City, Florida. Navy researchers are working on a task involving the control of underwater, surface, and aerial vehicles (some unmanned) that may have some similarity to Air Traffic Control. After the tour, there was a discussion of possible common areas of research. (E. Stein, WJHTC)

NTML: A research psychologist from the William J. Hughes Technical Center's NAS Human Factors Group traveled to Chicago Center to investigate use of the National Traffic Management Log (NTML) during severe weather. The researcher observed operations and identified several

areas where the NTML can be improved to provide greater efficiency. The most critical area is the display of status. The NTML does not provide a single view where specialists can manage and monitor the status of traffic management initiatives. Currently, specialists send all events to a separate system that provides them with that capability. One of the improvements planned for future integration into the NTML is a Status Information Area. This feature will provide specialists with a consolidated view of current and pending initiatives, and will allow them to manage the data with capabilities such as sorting. (E. Stein, WJHTC)

Weather: Research psychologists from the William J. Hughes Technical Center's NAS Human Factors Group conducted a Weather Work Group meeting. The work group consists of terminal weather specialists and research psychologists from ACB-220 and NASA-Ames Research Center. During this meeting, the group refined traffic scenarios and weather displays for a research project that is investigating terminal controllers' weather information needs. Additionally, the work group developed experimental procedures for the tactical use of advanced weather information. (E. Stein, WJHTC)

Risk Management: A research psychologist from the William J. Hughes Technical Center's NAS Human Factors Group attended a Program Review for Risk Management Decision Support – RPD 676 Commercial Aviation Requirements. The review covered the previous year activities for Requirements 01-04. Researchers will now be working on Requirement 05, Development of Aviation Safety Evaluation Decision Support Prototype Tools. (E. Stein, WJHTC)

Controller Displays: The William J. Hughes Technical Center's NAS Human Factors Group supported ATO Terminal and the Air Traffic Enhancement and Modernization team (ATEAM) in an effort to develop color palettes for TRACON controller radar displays. There is significant interest in this project among field sites that are using new Standard Terminal Automation Replacement System Terminal Controller Workstations or Automated Radar Terminal System Color Displays to use color to code information such as track ownership. ATO Terminal intends to develop a palette or set of palettes that meet the field sites' needs while also following good human factors principles and providing a standardized user interface that eases system maintenance and training. The NAS Human Factors Group used its ATC simulation and prototyping platform, the Distributed Environment for Simulation, Rapid Engineering, and Experimentation, to develop palettes for demonstration to the ATEAM. The palettes were designed to provide readable, distinguishable, and nameable colors that help controllers extract information easily while minimizing other problems. This was the second prototyping session with the ATEAM on this project, and focused on coding schemes for track ownership and mapping. The activity resulted in a provisional palette that will be tested further in a human-in-the-loop simulation in FY05. (E. Stein, WJHTC)

*More information on human factors research can be found at
the FAA Human Factors (AAR-100) web site: <http://www.hf.faa.gov>*

Mark D. Rodgers
FAA (AAR-100)



July 19-25, 2004 – Farnborough International 2004, Farnborough Aerodrome, England
<http://www.farnborough.com/>

July 22-August 2, 2004 – 52nd Annual EAA AirVenture Fly-In, Wittman Field, Oshkosh, WI
[EAA AirVenture Oshkosh 2004](#)

July 27-August 2, 2004 – 52nd Annual AirVenture, Oshkosh, WI <http://airventure.org/>

July 28 – August 1, 2004 – 112th Convention of the American Psychological Association.
Honolulu, Hawaii <http://www.apa.org/convention>

August 1-4, 2004 – Designing Interactive Systems, Cambridge, MA
<http://www.sigchi.org/DIS2004/>

August 2-6, 2004 – Westin Hotel, Providence, RI
[22nd International System Safety Conference, Staying the Course for System Safety](#)

August 4-8, 2004 – Westin Chicago River North, Chicago, IL
[26th Annual Meeting of the Cognitive Science Society \(CgSci\)](#)

August 5-7, 2004 – CogSci 2004, 26th Annual Meeting of the Cognitive Science Society, Westin
River North, Chicago, IL cogsci2004@cs.northwestern.edu

August 8-12, 2004 – 31st International Conference on Computer Graphics and Interactive
Techniques, Los Angeles Convention Center, Los Angeles, CA
<http://www.vr.clemson.edu/eyetracking/etra/2004/>

August 16, 2004 – Deadline for papers - 13th Annual Symposium on Aviation Psychology
(ISAP), Civil Aerospace Medical Institute (CAMI), Oklahoma City, OK, April 18-21, 2005.
<http://www.cami.jccbi.gov/>

August 16-19, 2004 - 6th Workshop on Risk Analysis and Safety Performance Measurements in
Aviation, Crystal City, VA. <http://aar400.tc.faa.gov/AAR424/Workshop2004/>.

August 16-19, 2004 - [AIAA Modeling and Simulation Technologies Conference and Exhibit](#)
Rhode Island Convention Center, Providence, RI

August 22-27, 2004 – IFIP 13.5 Working Conference on Human Error, Safety, and Systems
Development, Toulouse, France [Advance program](#)

August 23-27, 2004 - SAE G-10 Human Behavioral Performance Committee Semiannual Meeting, Seattle, WA <http://www.sae.org/standardsdev/aerospace/g10tag.htm>

August 23-27, 2004 – Aircraft Instruments Meeting, Bellvue, WA elizd@sae.org

September 1-3, 2004 – ICAO Aviation Language Symposium, Montreal, Canada
<http://www.icao.int/icao/en/anb/meetings/IALS/index.html>

September 5-9, 2004 - [52nd International Academy of Aviation and Space Medicine](#)
Sun City, South Africa

September 8-9, 2004 – Civil Aviation Safety Symposium 2004, Westin Hotel Galleria, Dallas, TX <http://www.asdnet.org/cass/default.htm>

September 14-17, 2004 – 22nd International Air Cargo Forum and Exposition, Basque Country, Spain <http://www.tiaca.org>

September 14-17, 2004 – National Cargo Security Council 2004 Conference & Exhibition, Riviera Hotel & Casino, Las Vegas, NV <http://www.cargosecurity.com>

September 16, 2004 – Aircraft Lighting Meeting, Nashville, TN elizd@sae.org

September 19-20, 2004 – Association for the Advancement of Medical Instrumentation AAMI/HE Human Factors Engineering Committee Meeting, New Orleans, LA
ntongson@aami.org

September 20, 2004 – Nondestructive Methods and Processes Committee Meeting, Albuquerque, NM kerrir@sae.org

September 20-22, 2004 [AIAA 1st Intelligent Systems Technical Conference](#) Hilton Chicago, Chicago, IL

September 20-22, 2004 - [AIAA 4th Aviation Technology, Integration and Operations \(ATIO\) Forum](#) Hilton Chicago, Chicago, IL

September 20-23, 2004 - [AIAA 3rd "Unmanned Unlimited" Technical Conference, Workshop and Exhibit](#) Hilton Chicago, Chicago, IL

September 20-24, 2004 – Human Factors and Ergonomics Society 48th Annual Meeting, Sheraton New Orleans Hotel, New Orleans, LA <http://www.hfes.org/>

September 27-29, 2004 – SAFE Association 42nd Annual Symposium, Grand America Hotel, Salt Lake City, UT <http://www.safeassociation.com/symposium.htm>

September 28 – October 8, 2004 – ICAO Assembly 35th Session, Montreal, Canada
<http://www.icao.int/icao/en/assembl/a35/index.html>

September 29 – October 1, 2004 – 2004 International Conference on Human Computer Interaction (HCI-Aero), Toulouse, France
<http://www.eurisco-international.com/hci-aero2004>.

October, 2004 – 18th Airbus/JetBlue Human Factors Symposium, New York City, NY
<http://www.airbus.com/customer/events.asp>

October 4-7, 2004 – SAE SEAT – Aircraft Seat Committee Meeting, Albuquerque, NM
mlemank@sae.org

October 5-7, 2004 – Aircraft Seat Committee Meeting, Albuquerque, NM
mlemank@sae.org

October 10-16, 2004 – ACM Multi-Media 2004, New York, NY <http://www.mm2004.org/>

October 11-14, 2004 – User Interface 9 Conference, Cambridge, MA uiconf@uie.com.

October 12-14, 2004 – Shared Vision of Aviation Safety Conference, San Diego, CA
<http://www.aviationsafetyconference.com/index2.html>

October 12-14, 2004 – 57th Annual Business Aviation Association Meeting and Convention, Las Vegas County Convention Center, Las Vegas, NV <http://web.nbaa.org/public/cs/amc/>

October 13-15, 2004 – Sixth International Conference on Multimodal Interfaces, Penn State University, State College, PA <http://www.icmiplace.org/>

October 18-19, 2004 – National Academies Institute of Medicine Annual Meeting, National Academy of Sciences, Washington, DC <http://wwwsearch.nationalacademies.org/>

October 18-22, 2004 – AC-9 Aircraft Environmental Systems Meeting, Wichita, KS
mlemank@sae.org

October 19-20, 2004 – Aerospace Council Meeting, Toulouse, France
mlemank@sae.org

October 21-23, 2004 – Aircraft Owners and Pilots Association Expo 2004, Long Beach Convention and Entertainment Center, Long Beach, CA <http://www.aopa.org/expo/2003/virtual/>

October 23-27, 2004 – NordiCHI 2004, Tampere, Finland <http://www.cs.uta.fi/nordichi2004/>

October 24-27, 2004 – UIST 2004, 17th Annual ACM Symposium on User Interface Software and Technology, Santa Fe, NM <http://www.acm.org/uist/>

October 25-28, 2004 - [7th Annual Systems Engineering Conference](#) Dallas Marriott Quorum, Dallas, TX

October 25-28, 2004 – SAE S-9 Cabin Safety Technical Committee Meeting, San Diego, CA
mlemank@sae.org

October 25-28, 2004 – DoD Maintenance Seminar and Exhibition, Hilton Americas, Houston, TX
<http://www.sae.org/calendar/aeromtg.htm>

October 26-28, 2004 – ICAO Security Seminar, Merida, Mexico <http://www.icao.org>

October 27-29, 2004 – Human Factors and Ergonomics Society Europe Chapter Annual Meeting, Delft University, the Netherlands
http://utopia.ision.nl/users/hfsec/meeting/ec_meet.htm

October 27-29, 2004 – S-9 Cabin Safety Technical Committee Meeting,, San Diego, CA
mlemank@sae.org

October 31, 2004 – ATCA Annual Conference and Exposition, Marriott Wardman Park Hotel, Wash., DC
http://www.atca.org/event_items.asp#

November 1-4, 2004 – DOD Human Factors Engineering Technical Advisory Group Meeting, Holiday Inn Select, Alexandria, VA
<http://hfetag.dtic.mil/meetschl.html>

November 2-4, 2004 – World Aviation Conference, Hilton Hotel, Reno, NV
<http://www.sae.org/events/wac/>

November 4-5, 2004 – Royal Aeronautical Society Seminar - Human Factors Training in Aviation Maintenance, RAF Bentley Priory, Stanmore, near Watford, North London
<http://www.raes-hfg.com/xmhfttraining.htm>

November 8-9, 2004 – European Aviation Training Symposium, Vienna, [Austria](#)
<http://www.at-events.com/eats/conference.asp>

November 12-17, 2004 – American Society for Information Science and Technology Annual Meeting, Providence, RI asis@asis.org

November 15-18, 2004 – 57th Annual International Air Safety Seminar (“Sharing Knowledge to Improve Safety”), Pudong Shangri-La Hotel, Shanghai, China
<http://www.flightsafety.org/seminars.html>

November 15-18, 2004 – Fire and Cabin Safety Research Conference, Lisbon, Portugal
www.caa.co.uk/srg/intsd/event.asp?groupid=73

November 16, 2004 - FY04 General Aviation, Vertical Flight, and Aviation Maintenance Human Factors Program Review, FAA Headquarters Bessie Coleman Training Center, Wash, DC
<mailto:william.krebs@faa.gov>.

November 18-19, 2004 – IT World Expo, Toronto, Canada richardp@WowGao.com

November 18-21, 2004 – 45th Annual Meeting of the Psychonomic Society, Hyatt Regency and Millenium Hotels, Minneapolis, MN [45th Annual Meeting of the Psychonomic Society](#)

January 9-12, 2005 – International Conference on Intelligent User Interfaces, San Diego, CA <http://www.catamaranresort.com/>

January 9-13, 2005 – TRB 84th Annual Meeting, Washington, DC <http://trb.org/calendar/>

January 10-13, 2005 - 43rd AIAA Aerospace Sciences Meeting and Exhibit, Reno Hilton, Reno, NV <http://www.aiaa.org/>

January 25-27, 2005 – AE-2 Aerospace Lighting Committee Meeting, New Orleans, LA elizd@sae.org

January 28, 2005 – Deadline for papers - 6th USA/Europe ATM Seminar, Baltimore, MD, June 2005 <http://atmseminar.eurocontrol.fr/>

April 2-7, 2005 – CHI 2005, Portland, OR chi2005-chair@acm.org.

April 11-15, 2005 – SAE 100th Anniversary World Congress, Cobo Hall, Detroit, MI <http://www.sae.org/congress/about/news/congressdates.htm>

April 17-22, 2005 – International Federation of Air Traffic Controller's Associations, Melbourne, Australia http://www.ifatca.org/conferences/annual_conference.htm

April 18-21, 2005 – 13th International Symposium on Aviation Psychology (ISAP), Civil Aerospace Medical Institute (CAMI), Oklahoma City, OK (note: call for papers deadline is August 16, 2004). <http://www.cami.jccbi.gov/>, <http://www.wright.edu/isap/>

May 9-12, 2005 - 76th Annual Scientific Meeting of the Aerospace Medical Association, Kansas City, MO <http://www.asma.org/>

June 2005 – 6th USA/Europe ATM Seminar, Baltimore, MD (note: call for papers deadline is January 28, 2005) <http://atmseminar.eurocontrol.fr/>

July 22-28, 2005 – HCI International 2005, 11th International Conference on Human-Computer Interaction, Caesars Palace, Las Vegas, NV hci2005@ecn.purdue.edu

August 15-18, 2004 - 43rd AIAA Aerospace Sciences Meeting and Exhibit, Hyatt Regency San Francisco at Embarcadero Center, San Francisco, CA <http://www.aiaa.org/>

August 18-21, 2005 - 113th Convention of the American Psychological Association, Wash, DC <http://www.apa.org/convention>

September 12-16, 2005 – Interact 2005, Tenth IFIP TC13 International Conference on Human-Computer Interaction, Rome, Italy <http://www.interact2005.org/>

September 25-28, 2005 - 11th Ka and Broadband Communications Conference and 23rd AIAA International Communications Satellite Systems Conference 2005 (organized by IIC), Aurelia Convention Center, Rome, Italy <http://www.aiaa.org/>

September 26-28, 2005 - AIAA 5th Aviation, Technology, Integration, and Operations Forum (ATIO), Hyatt Regency Crystal City, Arlington, VA <http://www.aiaa.org/>

September 26-28, 2005 - AIAA 2nd Intelligent Systems Conference (IS), Hyatt Regency Crystal City, Arlington, VA <http://www.aiaa.org/>

September 26-30, 2005 – Human Factors and Ergonomics Society 49th Annual Meeting, Royal Pacific Resort at Universal Orlando, Orlando, FL <http://hfes.org/meetings/menu.html>

October 3-6, 2005 – SAE 2005 AeroTech Congress and Exhibition, Gaylord Texan Resort and Convention Center, Dallas/Fort Worth Airport Area, Texas
<http://www.sae.org/events/conferences/aerospace/>

October 24-25, 2005 – National Academies Institute of Medicine Annual Meeting, National Academy of Sciences, Washington, **DC** <http://wwwsearch.nationalacademies.org/>

January 9-12, 2006 - 44th AIAA Aerospace Sciences Meeting and Exhibit, Reno Hilton, Reno, NV <http://www.aiaa.org/>

January 22-26, 2006 – TRB 85th Annual Meeting, Washington, DC <http://trb.org/calendar/>

Note: Calendar events in Italics are new since the last Newsletter



Comments or questions regarding this newsletter?
Please contact Bill Berger at (334) 271-2928
or via e-mail at bill.ctr.berger@faa.gov

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